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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/743,531	06/05/2001	Hirofumi Ohnari	010006	4037

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EXAMINER

BUSHEY, CHARLES S

ART UNIT	PAPER NUMBER
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1724

DATE MAILED: 08/08/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/743,531

Applicant(s)

OHNARI, HIROFUMI

Examiner

Scott Bushey

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 July 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) 6 and 7 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 8 and 9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 June 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

1. Applicant's election without traverse of the species of Fig. 3 in Paper No. 8 is acknowledged.

Specification

2. The abstract of the disclosure is objected to because legal phraseology, i.e., "comprises" and "said", should be avoided in the abstract. Correction is required. See MPEP § 608.01(b).
3. The disclosure is objected to because of the following informalities: 1) on pages 6 and 7 of the specification, the brief description of the drawings must refer to each of the figures in the application, i.e., Figs. 1a and 1b, Figs. 2a and 2b, Figs. 5a and 5b, and Figs. 6a and 6b; 2) page 10, line 12, "out" should be replaced by --cut-- before "off".

Appropriate correction is required.

Drawings

4. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the plurality of pressure liquid inlets, as recited by instant claim 3, must be shown or the features canceled from the claims. No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

5. Claims 1-5, 8, and 9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Regarding claims 1-5, 8 and 9, the phrase “swirling type” renders the claims indefinite because the claims include elements not actually disclosed (those encompassed by “type”), thereby rendering the scope of the claims unascertainable. See MPEP § 2173.05(d).

Also in each of claims 1-5, 8 and 9, applicant should insert one of the functional terms “the” or “a” to provide a clearer and more definite recitation of the claimed invention.

In claim 8, on line 12, “guiding” is misspelled.

In claim 9, on the penultimate line, “cut-off” is misspelled.

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1, 2, 8, and 9 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Fontein et al (Figs. 1, 4a and 4b; col. 1, lines 31-36; col. 7, lines 1-19).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claims 3-5, 8, and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fontein et al.

Fontein et al (Figs. 1, 4a and 4b; col. 1, lines 31-36; col. 7, lines 1-19) as has been applied above substantially disclose applicant's invention as recited by instant claims 3-5, 8, and 9, except for the plural liquid inlets and their respective placement within the gas-liquid contacting apparatus as disclosed by Figure 1 of the reference. Fontein et al (Figs. 4a and 4b) do however envisage the use of multiple, tangential pressure liquid inlet streams placed along the circumferential wall of the contact space to improve contact between the phases. It would have been obvious for an artisan at the time of the invention, to provide the device of Figure 1 of the reference with plural, tangential liquid inlets along the circumferential wall of the contact space to improve contact between the phases, in view of the teachings envisaged within the same reference. Furthermore, although the reference is largely silent as to the dynamic mechanism through which contact between the phases occurs within the disclosed device, the fact that the applied reference teaches an apparatus that anticipates applicant's apparatus would suggest to one having ordinary skill in the art that the method of contact between the phases, as recited by instant claims 8 and 9, would have been obvious to one having ordinary skill in the art at the time of the invention.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


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11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott Bushey whose telephone number is (703) 308-3581. The examiner can normally be reached on Monday-Thursday 6:30AM-5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David A. Simmons can be reached on (703) 308-1972. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7718 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Scott Bushey
Primary Examiner
Art Unit 1724


8-6-02

csb
August 6, 2002